

## The Identity of Riddell's Seven Validly Published but Over-looked Pteridophytic Binomials

ROBERT L. WILBUR

Department of Biology, Duke University, Durham, NC 27708

MARGARET K. WHITSON

Department of Biological Sciences, Northern Kentucky University,  
Highland Heights, KY 41099

**ABSTRACT.**—In 1853 J. R. Riddell validly published seven binomials of pteridophytes for species from Alabama, Louisiana and Texas that were missed by the standard indices. Only one of these names, *Lycopodium corallinum*, is the first name validly published for a currently recognized species replacing *Selaginella riddellii*. The six other binomials prove to be later synonyms of species of *Adiantum capillus-veneris*, *Cheilanthes alabamensis*, *Dryopteris ludoviciana* and *D. kunthii*, *Pellaea ovata* and *Thelypteris hispidula*.

Systematic botany, with its heavy emphasis upon nomenclatural priority, is completely dependent upon up-to-date bibliographic indices. Consequently, it was surprising that a beginning graduate student found, after a very short search, a paper dealing with mostly southeastern plants and containing thirty-four species and varieties of vascular plants that had been overlooked for over a century and a half. Perhaps its discovery was because Duke University has an unusually strong medical library. Several botanists (e.g. Trelease (1924, p.115, 202), Rehder (1949, p.119), Mueller (1951, p.86) and Little (1975, p.234)) traced a few of these names to their validly published source but failed to follow up and complete the bibliographic record. Recording such names, even if all are synonyms, is important because of the potentially unsettling role such names might play, if unrecorded, upon future nomenclatural stability. As bad as it is to make the required changes now, it is even worse to delay the changes until later, when we have become even more accustomed to the names that must be abandoned. It is consequently best to make the necessary change as soon as possible and it is our duty to record promptly all validly published names and combinations. For example, of the seven binomials of pteridophytes proposed by Riddell (1853), six are later synonyms, but one binomial has priority and consequently must replace the currently employed binomial published in 1917. The resultant nomenclatural change certainly is to be regretted. The remaining six binomials of Riddell's pteridophytes readily fit into the synonymy of species named earlier by other botanists. Avoidance of such nuisances depends largely upon botanists bringing such bibliographic oversights promptly to the attention of the International Plant Name Index ([http://www.ipni.org/ipni/query\\_ipni.html](http://www.ipni.org/ipni/query_ipni.html)). Actually, little harm was done by the belated attention paid to Riddell's paper. Most of the thirty-four proposed new species or varieties that he described as new had been published earlier by



other scientists who had what Riddell did not have in antebellum New Orleans: *i.e.* an adequate herbarium for comparative purposes and a far more representative botanical library.

The present report deals only with the pteridophyte species validly published by Riddell (1853). John Leonard Riddell (1807–1865) was an important and versatile scientist in the mid-western section of the United States prior to the Civil War. Most of his career was spent in New Orleans where, from 1836 until his death in 1865, he was Professor of Chemistry in the Medical Department of the University of Louisiana.

Those interested in learning more about the many-faceted career and accomplishments of John L. Riddell may wish to refer to Bailey (1883), Breeden (1994), Dexter (1988), or especially to Riess's (1977) very extensive account. Besides being a professor of Chemistry in a medical school, as well as a botanist and a geologist, he served as Director of the Mint in New Orleans, and later as postmaster, and surprisingly enough is credited as an inventor of the binocular microscope.

Brown & Correll (1942), in their "Ferns and Fern Allies of Louisiana," noted that Riddell (1852) published a checklist of the flora of Louisiana based on his own studies together with those of Dr. Josiah Hale of Alexandria and Professor W. M. Carpenter of New Orleans. In its brief introduction, Riddell stated that the checklist had been abridged from his manuscript submitted earlier to the Smithsonian Institute entitled "Plants of Louisiana" in 1851. This manuscript was apparently accompanied by some illustrations, as Riddell was said to be "an accomplished botanical artist" (Brown and Correll, 1942, p.161). Apparently the Smithsonian sent the manuscript, together with some specimens, for review to Asa Gray who, according to Ewan reported in (Stafleu & Cowan (1983, p.765), "suppressed" it, and consequently the "Plants of Louisiana" was never published. Riddell (1852) did publish the comparatively bare checklist entitled "Catalogus flora ludoviciana," and in the following year (1853), he extracted the names of the new species and varieties and by providing descriptions validly published them. This second paper was very rarely noted by the botanical community, which correctly observed that the names appearing in the checklist were not validly published since they lacked descriptions and hence were invalid according to Article 32 (Greuter, 2000, p.33). When these names were taken up from the checklist by later authors, who provided descriptions, the species were attributed to them or, for example, to Riddell ex Rydberg in the case of *Physalis carpenteri*. Most of Riddell's names from 1853, although validly published, never appeared in *Index Kewensis*, the *Gray Index*, or *Index Filicum*. Riddell (1853) did include several species that were not listed in the Louisiana checklist of 1852 since some were actually from central Texas and were collected on his two trips there in 1839 and another was from *Alabama*. Breeden (1994) has extracted a portion of the journal that Riddell kept, describing his travels in a slender book entitled *A Long Ride in Texas*.

Riddell's seven pteridophytic binomials, validly published in 1853, are listed below in the order in which they appeared. The identities of these seven binomials were determined by study of the protologues and floristic accounts of the region. Brown & Correll's treatment (1942) was an important first source. The



synonomies included were based upon the recent literature. An effort was made to borrow authentic specimens from several of the most likely herbaria with limited success. Since, in all probability, protracted searches would be required to find such poorly labeled and identified specimens in most large herbaria, it is not expected that we have seen all of the pertinent specimens. In all probability a personal search of the large herbaria will be necessary. For this reason, lectotypes have not been declared as such an important step deserves judicious appraisal of all of the material available and not a choice from the few that we have seen. We have noted in each case all authentic material examined.

The first paragraph after the numbered binomial employed by Riddell at the start of each of the seven descriptions of pteridophytes is the complete prologue of the original publication.

- 1) *Lycopodium corallinum* Riddell, New Orleans Medical & Surgical J. 9:617. 1853.

*Lycopodium corallinum*. *Leaves* lance-ovate, subulate, carinate, less than one line long, in eight indistinct rows, appressed and imbricate upon the stem; *spikes* numerous, terminal, arising continuously from the branches, 4-sided, from a quarter to a half inch long and near the tenth of an inch thick, sub-erect; *bracts* ovate, cuspidate, sub-membranaceous, larger and longer than the ordinary leaves; *sporangia* hidden, axillary, yellow, spheroidal bean-shaped, sub-compressed, near one sixth of a line in diameter. Cæspitose, not creeping, stems branching and about half a line thick. Perennial and sempervirent on dry granular quartz rocks at Kaolin creek, near the San Saba, Texas. (November, 1839.) Also near Kisatchy Springs, Western Louisiana, where it has been found by Dr. Hale. Plants of La. No 1797. Natural order Lycopodiaceæ.

***Selaginella corallina* (Riddell) Wilbur and Whitson, *comb. nov.***

*Lycopodium corallinum* Riddell, New Orleans Medic. & Surg. Jour. 9:617. 1853. Type locality TX. San Saba [?] Co.” on dry granular quartz rocks at Kaolin Creek, near the San Saba, Nov 1839, *Riddell s.n.*

*Selaginella riddellii* Van Eseltine, Contr. U.S. Natl. Herb. 20:162. 1918. T.; TX. Waller Co.: near Prairie View, 3 Jan 1911, *F.W. Thurow* 7 (US, holotype US #690149).

*Selaginella arenicola* ssp. *riddellii* (Van Eseltine) Tryon, Ann. Missouri Bot. Gard. 42:24. 1955.

*Selaginella arenicola* var. *riddellii* (Van Eseltine) Waterfall, Rhodora 62:320. 1960.

The identity of this species first described by Riddell seems certain as it is the only species of *Selaginella* found in both western Louisiana and also central Texas. It clearly fits the description and an authentic specimen (GH!) has been examined. The 4-sided fruiting spike indicates that the species is a *Selaginella* and not a *Lycopodium* as initially proposed. The precise location of the type locality is uncertain, for that part of Texas was unsettled in 1839



when Riddell and a non-descript and varied union of several groups traveled together for protection against marauding bands of Comanches. The extracted portion of Riddell's journal published in Breeden (1994) account of *A Long Ride in Texas* gives an approximate location but not one more precise than somewhere "on dry granular quartz at Kaolin creek near the San Saba [River]."

Ranking the three taxa of *Selaginella* species forming what might be called the "arenicola complex" is anything but settled. Van Eseltine (1918) treated the three taxa as species, as did Clausen (1946), while Tryon (1955) treated them as subspecies of *S. arenicola*. Waterfall (1960) transferred the more western *riddellii* and also the more widespread and more northern *acanthanota* in the sand barrens of the Carolinas southward to varietal status, which would have automatically (ICBN Article 26) created the autonomic varietal epithet for the more southeastern taxon, i.e. *S. arenicola* var. *arenicola*. *Selaginella arenicola* var. *arenicola*. Valdespino (1993) in the Flora of North America treated *S. acanthanota*, ranging from se. North Carolina through peninsular Florida, as a separate species and *S. arenicola* and *S. riddellii* as subspecies of the species *S. arenicola*. Consequently, all three taxa have been amply provided with names at specific, subspecific and varietal rank. Such lack of agreement in ranking seems unworthy of science, but perhaps well reflects the superficiality of our understanding of the biological processes involved. It seems to us that the rank of species, the first ranking provided for each of the three taxa of the arenicola complex, serves present needs best and is nomenclaturally simplest. To treat the taxa as either subspecies or varieties in the future would involve new combinations with *S. corallina* as its basionym has priority at the rank of species. We have seen authentic material of Riddell's from the type locality (GH!) that was annotated as *S. riddellii* by D.S. Correll in 1936 and *S. arenicola* ssp. *riddellii* by R. Tryon in 1952. Adding immeasurably to the uncertainty is the report of Wunderlin and Hansen (2000, p.115) that Rolla Tryon had concluded that the differences in the arenicola complex were inconstant and that it was hence unwarranted to accept them as discrete taxa. Both *S. acanthanota* and *S. arenicola* in the past were thought to occur in Florida but Wunderlin & Hansen recognized only one species, *S. arenicola*, with no infraspecific taxa accepted. They suggested however that "further study is needed", a finding with which we fully concur. If as some now argue, there is only one species, then *Selaginella corallina* whose original publication at the rank of species has priority, would be the binomial for the taxon.

## 2) *Adiantum australe* Riddell, New Orleans Medical & Surgical J. 9:616. 1853.

*Adiantum australe*. Cæspitose; *frond* decomposed and supra-decomposed, outline lanceolate; *pinnules* short petioled, acute and wedge-form at base, of a lively green color, terminating in rounded serrulate sori-bearing lobes. The stalk (including the whole frond) is from six to thirty inches in length, shining, of a wine-color, nearly black when old; usually more or less pendulous from the side of limestone cliffs, adjacent to springs or streams of water. Western Texas, (Sept. 1839) Alabama, Florida.



Compared with European specimens of *A. Capillus-Veneris*, which it closely resembles, it seems much larger, and the pinnules more lobed. Plants of La. No. 1775. Natural order Filices.

***Adiantum capillus-veneris* var. *protrusum*** Fernald, *Rhodora* 52:203. 1950.  
TYPE. GA. Clay Co.: 29 Oct 1902, *R.M. Harper 1791* (GH, holotype).

Fernald (1950b) proposed two North American varieties for the subtropical, widespread species *A. capillus-veneris* L., whose type came from Europe. In the account of the genus in the eighth edition of Gray's Manual (1950a) that surely was sent to the printers before his far more detailed account for *Rhodora* (1950b) was prepared, Fernald merely summed up the variation in this extremely widespread species by stating that the American plant "has longer and more slender rhizomes than the typical European plant, the various geographic vars. are not yet worked out." Another difference between the American representatives and the European noted by Fernald are confirmed by the descriptions of several of the floras published for the area, such as Small (1938, p. 118), Brown & Correll (1942, p. 97), and Correll (1955, p. 75), who all describe the scales of the representative of *A. capillus-veneris* in their area as of a tan or light brown color. However, Shaver (1954, p. 60) describes the scales of the Tennessee representatives as "shining and dark brown." We have not yet seen authentic specimens from Louisiana made by either Riddell, Hale or Carpenter but there is a water color of *Adiantum australe* made by Riddell at GH that appears as a photograph in Brown and Correll's *Ferns and Fern Allies of Louisiana* (p.99). Paris's treatment in the *Flora North America* (2: 127. 1993.) has no doubt evaluated all of these claims and concluded that none of these segregates deserve recognition as separate taxa at either specific or infraspecific ranking. Kartesz (1994, p.1) reached the same conclusion. The problem probably deserves another look. Dr. Layne Huiet (UC) is presently investigating the genus and may have in the near future information bearing on this question.

Therefore *Adiantum australe* Riddell is validly published and a synonym of *A. capillus-veneris* L. If found to be specifically distinct, Riddell's binomial would be the correct name whereas, if varietally distinct, *A. australe* would be a synonym of *A. capillus-veneris* var. *protrusum* Fernald (1950b, p. 203). Paris (1993, p.127) noted that in North America no pattern of morphological variation could be discerned although "a number of segregate taxa have been recognized." Chromosome number for Old World specimens has been reported as diploid ( $2n = 60$ ) while Wagner (1963, p.4) found *Adiantum capillus-veneris* in southern Florida to be tetraploid ( $2n = 120$ ). Paris concluded her treatment of this widespread species by recommending that additional investigations were needed to determine whether *A. capillus-veneris* in North America is conspecific with those in Eurasia and Africa.

The synonymy of this taxon is less fully resolved, as the taxonomy at present seems to us more uncertain than that of the other taxa treated.

3) *Pteris Buckleyi* Riddell, *New Orleans Medical & Surgical J.* 9:616. 1853.

*Pteris Buckleyi*. *Frond* nearly glabrous, bipinnate; outline lanceolate; (two to four inches long by less than one inch in width) *pinnæ* alternate, sessile, wedge-



ovate in outline, partly pinnate, partly pinnatifid; *pinnules* or lobes obtuse, sub-ovate, or oblong, or (by the approximation of the opposite sori) linear-oblong, sessile, decurrent; *veins* alternately and ramosely forked; proper midrib none; *sporangia* arranged to form narrow continuous marginal sori, covered by the membranaceous reflexed margin of the pinnule; *stipe* black, shining, wire-like, one fourth of a line in thickness, glabrous, sub-pubescent where it is continued through the frond, arising from a tuft of dense ferruginous wool at the base, longer than the frond, apparently caespitose, four to eight inches. Limestone cliffs on the Tennessee river, at Florence, Alabama, where it was found by S. B. Buckley in 1848. Natural order Filices.

***Cheilanthes alabamensis*** (S. B. Buckley) Kunze, *Linnaea* 20:4. 1847.

*Pteris alabamensis* Buckley, *Amer. J. Sci. Arts* 45:177. 1843.

*Pteris Buckleyi* Riddell, *New Orleans Medical & Surgical J.* 9:616. 1853.

*Pellaea alabamensis* (Buckley) Baker ex Hooker & Baker, *Syn. Filicum* 148. 1867.

*Allosorus alabamensis* (Buckley) Kuntze, *Rev. Gen. Pl.* 2:806. 1891.

*Cheilanthes microphylla* var. *alabamensis* (Buckley) Davenp., *Bot. Gaz.* 19:396. 1894.

This wide-ranging species is found from southwestern Virginia southwestward into southeastern Arizona and south into Mexico. Windham and Rabe (1993, p.165) report that throughout almost its entire range *Cheilanthes alabamensis* it is an apogamous triploid, but a diploid population is known from a small area in Nuevo Leon (northeastern Mexico). Although the species is now known in Louisiana, Riddell knew it only from Alabama specimens collected by Buckley.

4) *Pteris zygophylla* Riddell, *New Orleans Medical & Surgical J.* 9:616. 1853.

*Pteris zygophylla*. *Frond* glabrous, supra-decompound, outline triangular lanceolate; *subdivisions* of the stipe alternate, petiolate, divaricate; *pinnules* mostly in pairs, (zygophyllous) trapeziform, sub-ovate, obliquely cordate at base; apex truncate, (about half inch long by one third or one fourth inch broad); *veins* immersed in the substance of the pinnule; *veinlets* once or twice forked near the lateral margin, where they bear the *sporangia*, which form a marginal spore extending the whole length of each pinnule on each side, more or less covered by the reflected membranaceous margin of the pinnule; *stipe* yellowish brown, smooth above, chaffy near the roots, sub-scandent; about two feet high. Grows among granite rocks in the mountains of the Camanche country, Texas. (Oct. 1839.) Natural order Filices.

***Pellaea ovata*** (Desv.) Weatherly, *Contr. Gray Herb.* 114:34. 1936.

*Pteris ovata* Desv., *Mém. Soc. Linn. Paris* 6:301. 1827.

*Pteris flexuosa* Kaulf. ex Schlecht. & Cham., *Linnaea* 5: 614. 1830. excl. Kunze, *Linnaea* 13:136. 1839. *pro. syn.*



*Allosorus flexuosa* (Kaulf. ex Schlecht. & Cham.) Link, Fil. Sp. Hort. Biol. 60:1841.

*Pteris zygophylla* Riddell, New Orleans Medical & Surgical J. 9:616. 1853.

Alice Tryon (1968) demonstrated that the representatives of *Pellaea ovata* in central Texas and northeastern Mexico are the 64-spored, sexually reproducing race that has a far less extensive geographic range than the 32-spored, asexually reproducing (apogamous) race that ranges from northwestern Mexico southward into Bolivia. The occurrence of a narrowly distributed sexual phase and a widespread apogamous (= asexual) phase seems to be a frequently encountered occurrence among pteridophytes. Making the same point but perhaps more emphatically, Alice Tryon (1972, p.240) noted that "in *Pellaea ovata* (Desv.) Weatherby which as a sexual (2X) and an apogamous (3X) phase, the range of the later is over 4000 miles greater than the sexual race." There is no specimen of *Pellaea ovata* (Desv.) Weatherby among the specimens that we have seen, but there is a fine, colored plate of that species among the specimens at GH annotated by Alice F. Tryon in 1953 as *P. ovata*. It was apparently one of the illustrations praised by Brown & Correll (1942, p.161). Riddell (1853) stated that his specimens came from "the granite rocks in the mountains of the Comanche Country."

5) *Dryopteris Aureliana* Riddell, New Orleans Medical & Surgical J. 9: 617. 1853.

*Dryopteris Aureliana*. *Fronde* lance ovate in outline, tapering from below the middle towards the base, sub-pilose, pinnate; two or three lower pairs of pinnules reflexed; *pinnules* nearly opposite, sessile, oblong, linear, acute, deeply pinnatifid; *lobes* oblong, rounded, minutely repand, bearing sori always distinct near the margin; *venation* simply pinnate, veinlets simple and passing centrally beneath the sori; *stipe* chaffy below. One to two feet high. Damp woods, New Orleans, and in other parts of Louisiana. June to August. Habitually more robust and of a deeper green than *D. Noveboracensis*, which in other respects it very closely resembles. Natural order Filices.

***Thelypteris hispidula* var. *versicolor*** (R. St. John) Lellinger, Amer. Fern J. 71: 94. 1981

*Dryopteris aureliana* Riddell, New Orleans Medical & Surgical J. 9:617. 1853.

*Thelypteris macilenta* E. P. St. John, Amer. Fern J. 26:50–53. pl. 5. 1936. T. FL. Hernando Co.: in a rocky hammock 7 miles NW of Brooksville, 4 May 1934, E. P. St. John s.n. (NY, holotype; herb. E. P. St. John, isotype).

*Thelypteris versicolor* R. St. John ex Small, Fern Se. States 250, pl. 1938. T. FL. Hernando Co., Brooksville, 17 Dec 1934, R. P. St. John 109 (NY, holotype).

*Dryopteris versicolor* (R. P. St. John) Broun, Index N. Amer. Ferns 82. 1938.

*Dryopteris macilenta* (E. P. St. John) Correll, Amer. Fern J. 28:53. 1938.



*Thelypteris quadrangularis* var. *versicolor* (R. P. St. John) A. R. Smith, Amer. Fern J. 71:25. 1971.

The Gray Herbarium kindly loaned a specimen that Professor Carpenter collected in Feliciana, Louisiana. It was originally named *Nephrodium noveboracense* or at least was so named while in the possession of George Thurber. There is no certainty that Riddell ever saw that specimen but Riddell's *Dryopteris aureliana* almost certainly was a duplicate but may have been obtained directly from Dr. Carpenter instead of the more circuitous path (Carpenter to Riddell to Smithsonian and then to the Gray Herbarium) that was the more usual route. In Riddell's checklist (1852, p.764) *Dryopteris aureliana* is referred to as Plants of Louisiana No. 1784 and specimens with this handwritten notation should be sought as a possible lectotype. The specimen loaned by GH was annotated by Alan R. Smith in 1979 as *Thelypteris hispidula* (Decne.) Reed.

Brown & Correll (1942) included the Riddell binomial thought to be lacking a description as a synonym of *Dryopteris versicolor* R. St. John, which they indicated was a hybrid by placing the × symbol in front of the name.

6) *Lastrea petiolata* Riddell, New Orleans Medical & Surgical J. 9:617. 1953.

*Lastrea petiolata*. *Fronde* long lanceolate in outline, broadest about midway and tapering both ways, partly bipinnate; *pinnules* petiolate; lower ones sub-cordate, triangular ovate, pinnatifid; middle ones pinnate, lance-linear in outline; upper ones pinnatifid, linear, falcate; *lobes* oblong and linear oblong, usually curved upwards, rounded at the end, serrulate; *fertiles* one often sub-pinnatifid; *veins* pinnately forked; *sori* circular and twice as large as in *Lastræa cristata*, placed midway between the midrib and margin, becoming sometimes nearly confluent; *indusium* peltate, nearly orbicular; *stipe* chaffy. Marshes Louisiana and Florida. Three to five feet high. August. Closely related to *L. cristata*. Plants of La. No. 1785. Natural order Filices. Authentic material (Plants of Louisiana No. 1785) was seen on loan from GH.

***Dryopteris ludoviciana*** (Kunze) Small, Ferns Se. States 281. 1938.

*Aspidium ludovicianum* Kunze, Amer. J. Sci. Arts. ser. 2. 6:84. 1848.

*Lastrea petiolata* Riddell, New Orleans Medical & Surgical J. 9:617. 1853.

*Nephrodium floridanum* Hook., Fil. Exot. 99. 1859.

*Aspidium floridanum* (Hook.) D. C. Eaton ex Chapm., Fl. So. U. S. 595: 1860.

*Aspidium cristatum* var. *floridanum* (Hook.) D. C. Eaton ex Mann, Cat. 55. 1868.

*Lastrea floridana* (Hook.) J. Sm., Ferns Brit. & For. ed. 2. 812. 1877.

*Dryopteris floridana* (Hook.) Kunze, Rev. Gen. Pl. 2:812. 1891.

*Filix floridana* (Hook.) Farwell, Ann. Rep. Mich. Acad. Sci. 18:81. 1916.

*Filix-mas cristata* var. *floridana* (Hook.) Farwell, Am. Midl. Nat. 12:254. 1931.



- 7) *Dryopteris Rafinesquiana* Riddell, New Orleans Medical & Surgical J. 9:617. 1853.

*Dryopteris Rafinesquiana*. *Frond* broad deltoid lanceolate, not tapering below, rather attenuated towards the summit, pinnate; *pinnules* vaguely alternate, sessile, lance-linear, ensiform, pinnatifid; divisions, extending about two thirds of the way to the midrib; *lobes* wedge-ovate, obtusish; *sori* round in rows on each side of the midrib of the lobe equidistant from the midrib and the margin, seldom crowded, never confluent; *indusium* peltate, orbicular or kidney-shaped; *venation* as in *D. Aureliana*. Frond often more than one foot broad. Two to four feet high. In fruit from April to November. About New Orleans and elsewhere in Louisiana.

Closely related to *D. Noveboracensis*, but differs from it in its chaffy stipe, different outline, and much greater size. Dedicated to the late C. S. Rafinesque, who, after years of excentric devotion to American botany, died 1840 in Philadelphia. Plants of La. No. 1784. Natural order Filices.

- Thelypteris kunthii*** (Desv.) C. V. Morton, Contr. U. S. Natl. Herb. 38:53. 1967.

*Thelypteris kunthii* Desv., Mém. Soc. Linn. Paris 6:256. 1827.

- Dryopteris Rafinesquiana* Riddell, New Orleans Medical & Surgical J. 9:617. 1853.

*Dryopteris normalis* C. Chr., Ark. för Bot. 9:31. 1910.

*Thelypteris normalis* (C. Chr.) Moxley, Bull. Southern California Acad. Sci. 19:57. 1920.

*T. macrorhizoma* R. St. John, Amer. Fern J. 32:146. 1943.

*T. saxatilis* R. St. John ex Small, Ferns Se. States. 236. 1938.

*T. unca* (R. St. John) Broun, Index N. Am. Ferns. 79. 1938.

*Dryopteris unca* (R. St. John) Broun, Index N. Am. Ferns. 82. 1938.

*Christella normalis* (C. Chr.) Holttum, Webbia 30:193. 1976.

Brown & Correll (1942, p. 53) placed Riddell's binomial of this species in the synonymy of *D. normalis* C. Chr., one of the synonyms included below for *T. kunthii*. Authentic material (No. 1784) from Louisiana was seen from GH.

#### LITERATURE CITED

- BAILEY, L. H. 1883. Some North American Botanists. VIII. John Leonard Riddell. Bot. Gaz. 8: 269–271.
- BREEDEN, J. O. (ED.) 1994. *A Long Ride in Texas. The Explorations of John Leonard Riddell*. Texas A & M University Press.
- BROWN, C. A. and D. S. CORRELL. 1942. *Ferns and Fern Allies of Louisiana*. Louisiana State University Press, Baton Rouge, Louisiana.
- CLAUSEN, R. T. 1946. Selaginella subgenus Euselaginella in the southeastern United States. Amer. Fern J. 36:68–82.



- CORRELL, D. S. 1955. *Ferns and Fern Allies of Texas. Flora of Texas 1: 3–121. pl. 1–39.* Texas Research Foundation. Renner, Texas.
- DEXTER, R. W. 1988. The Early Career of John L. Riddell as a Science Lecturer in the 19<sup>th</sup> Century. *Ohio J. Sci.* 88:184–188.
- FERNALD, M. L. 1950a. *Gray's Manual of Botany. 8<sup>th</sup> edition.* American Book Company. New York.
- FERNALD, M. L. 1950b. *Adiantum capillus-veneris* in the United States. *Rhodora* 52:201–208.
- GREUTER, W. ET AL. 2000. International Code of Botanical Nomenclature. *Regnum Vegetabile* 138.
- KARTESZ, J. T. 1994. A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland. 2<sup>nd</sup> edition. 1: lxi & 1–622.
- LITTLE, E. L. JR. 1975. *Checklist of United States trees (native and naturalized).* U.S. Dept. Agric. Agric. Hanb. 541. 375 pp.
- MUELLER, C. 1951. The oaks of Texas. *Contr. Texas Res. Found.* 1:21–323. pl. 1–100.
- PARIS, C. A. 1993. *Adiantum.* *Flora North America.* 2:125–130.
- REHDER, A. 1949. *Bibliography of cultivated trees and shrubs hardy in the cooler temperate regions of the northern hemisphere.* Arnold Arboretum. Harvard Univ. Jamaica Plains, MA.
- RIDDELL, J. L. 1852. *Catalogus flora ludoviciana.* *New Orleans Medical & Surgical Jour.* 8:743–764.
- RIDDELL, J. L. 1853. New and hitherto unpublished Plants of the Southwest mostly indigenous in Louisiana, and referred to by name in the “*Catalogus Flora Ludoviciana*,” ... and embraced in the MS. “Plants of Louisiana,” illustrated by specimens and drawings, deposited in the Smithsonian Institution in 1851. *New Orleans Medical & Surgical Jour.* 9:609–618.
- RIESS, K. 1977. John Leonard Riddell. *Tulane Stud. in Geology and Paleontology* 13:1–110.
- SHAVER, J. M. 1954. *Ferns of Tennessee.* Bureau of Publ. George Peabody Coll. for Teachers. Nashville, TN.
- SMALL, J. K. 1938. *Ferns of the Southeastern States.* The Science Press Printing Co., Lancaster, PA.
- TRELEASE, W. 1924. The American Oaks. *Mem. Natl. Acad. Sci.* 20:1–255. pl. 1–420.
- TRYON, A. F. 1968. Comparisons of sexual and apogamous races in the fern genus *Pellaea*. *Rhodora* 70:1–24.
- TRYON, A. F. 1972. Spores, chromosomes and relations of the fern *Pellaea atropurpurea*. *Rhodora* 74:220–241.
- TRYON, R. M. 1955. *Selaginella rupestris* and its allies. *Ann. Missouri Bot. Gard.* 42:1–99. f. 1–63.
- STAFLEU, F. A. and R. S. COWAN. 1983. *Taxonomic Literature 2nd ed.* 4. Utrecht.
- VALDESPINO, I. A. 1993. *Selaginellaceae.* *Fl. N. Amer.* 2:38–63.
- VAN ESELTINE, G. P. 1918. The allies of *Selaginella rupestris* in the southeastern United States. *Contr. U. S. Natl. Herb.* 20:159–172.
- WAGNER, W. H. JR. 1963. A biosystematic survey of United States Ferns – Preliminary Abstract. *Amer. Fern J.* 53:1–16.
- WATERFALL, U. T. 1960. Changes in status and new combinations for certain taxa in the Oklahoma flora. *Rhodora* 62:319–321.
- WINDHAM, M.D. and E.W. RABE. 1993. *Cheilanthes.* *Fl. N. Amer.* 2:152–169.
- WUNDERLIN, R. P. and B. F. HANSEN. 2000. *Flora of Florida.* 1:1–365. f. 1–76.



## Referees for 2005

All papers submitted to the journal are peer reviewed. Members of the editorial board and the Society, as well as additional scientists in cognate areas, do these reviews on a voluntary basis. It is their work that contributes to the high quality of articles in the American Fern Journal and to its continued success. The American Fern Society and I extend our thanks to the following reviewers for their assistance, diligence, and patience in the year 2005.

Preston Aldrich	Alfredo Huerta	W. Carl Taylor
David Barrington	Robbin Moran	Jack Tessier
David S. Conant	James Peck	Ronnie Viane
Don Farrar	Tom Ranker	Michael A. Vincent
Gerald J. Gastony	Eric Snyder	James Watkins
Gary Greer	Michael Sundue	Dean P. Whittier
Christopher Haufler		

---

## STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION

Publication title and number: *American Fern Journal* (0002-8444). Date of filing: September 5, 2005. Frequency of issue: quarterly. Annual subscription price 2005: \$35.00. Office of Publisher: c/o Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166-0299. Editor: R. James Hickey. The *American Fern Journal* is wholly owned by the American Fern Society, Inc., with no bond holders. The purpose, function, and nonprofit status of the Society and its tax exempt status for Federal income tax purposes remains the same as in past years. The average press run for Volume 95 is 1062, of which (for the issue appearing immediately prior to the filing date) 903 copies were mailed as paid circulation and 60 copies were mailed as free distribution, leaving 197 copies for office use and back-issues sales. I certify that these statements are correct and complete. GEORGE YATSKIEVYCH, Membership Secretary of AFS.